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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,051

03/18/2004

Ronald S. Plantan

011351.52877US

4611

23911 7590 12/27/2006  
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EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3683

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/27/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/803,051	Applicant(s) PLANTAN, RONALD S.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/19/06 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7, 8, 10, 11, 13, 14, 16-18, 20, 21, 23, 24, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 2655237 to Benson.

Re: claims 1, 2, and 16. Benson shows in figure 1 a brake disc comprising a hub portion 7, a friction portion 19, the friction portion formed as a generally planar ring as shown in figure 4 and a connecting flange portion 13, wherein the connecting flange portion connects a radially outer region of the hub portion to a radially inner region of the friction portion as shown, the connecting flange portion has a length such that when the hub portion and a wheel rim 10 adapted to be mounted on a hub end of a vehicle

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axle 5 are located at the hub end of the axle, the friction portion is outboard of the wheel rim as shown, and the friction portion has an outer radius shown at the top of element 19 greater than a greatest inner radius of the wheel rim as shown.

Re: claim 3. Benson shows in figure 1 the brake disc being a one-piece brake disc in the sense that the parts are combined to form one piece as shown.

Re: claims 4, 5, 17, and 18. Benson shows in figure 1 the limitation wherein at least one heat-conducting limiting section is provided on at least one of the connecting flange portion and the friction portion, particularly the connecting flange in the area around the lead line of number 56 as that area includes a section having a reduced thickness.

Re: claims 7, 8, 20, and 21. Benson shows in figure 1 the limitation wherein at least one ventilation aperture (shown surrounding element 14) is provided in the connecting flange portion.

Re: claims 10, 11, 13, 14, 23, 24, 26, and 27. Benson shows in figure 1 the limitation of wherein a plurality of cooling fins 35 are disposed about (to the right of) an inner radius of the friction portion.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 6, 9, 12, 15, 19, 22, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson.

Re: claims 6 and 19. Benson describes the invention substantially as set forth above including the limitation of at least one heat conduction limiting section including a section having a reduced thickness, but does not show the limitation wherein the reduced thickness section is ring shaped.

In *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration is significant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the connecting flange portion or the friction portion of Benson to have included a ring-shaped reduced thickness section in order to provide a means of reducing the amount of material used to make a portion of the brake disc.

Re: claims 9 and 22. Benson shows in figure 1 the limitation wherein at least one ventilation aperture (shown in the area of the portion of element 7 surrounding element 14) is provided in the connecting flange portion.

Re: claims 12, 15, 25 and 28. Benson shows in figure 1 the limitation of wherein a plurality of cooling fins 35 are disposed about (to the right of) an inner radius of the friction portion.

***Response to Arguments***

6. Applicant's arguments filed 9/19/06 have been fully considered but they are not persuasive. Applicant explains that the independent claims have been amended to replace the "extends from" language with the term "connects." Applicant further notes that "this term more specifically recites the physical connection of the outer radial region of the brake disc hub portion directly to the inner region of the friction portion of the disc." Examiner notes, however, that the statement in the Remarks is more specific than the claim language. Applicant discusses a connection of the outer radial region of the brake disc hub portion "directly" to the inner region of the friction portion of the disc in the Remarks. However, the claim language merely recites that the flange portion connects a radially outer region of the hub portion to a radially inner region of the friction portion. Even if Applicant amended the claims to recite the direct connection, Examiner maintains that the flange portion 13 directly connects a radially outer region of the hub portion 7 shown around the connector 14 to a radially inner region of the friction portion or the region of element 19 shown in the area to the right of the end of the lead line of number 26. Examiner notes that the area of element 19 shown to the right of the end of the lead line of number 26 is radially inner with respect to the radially outer region of element 19 shown at the end of the lead arrow of element number 19 shown in figure 1. Accordingly, the rejections have been maintained.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb  
December 20, 2006

*Melody M. Burch*  
**Melody M. Burch**  
**Primary Examiner**  
**Art Unit 3683**  
12/20/06